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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------------|------------------------|
| 10/549,835 | 09/16/2005 | Kenji Okamura | 7620-X05-004 | 1161 |
| 33771 7590 11/13/2007 PAUL D. BIANCO: FLEIT, KAIN, GIBBONS, GUTMAN, BONGINI, & BIANCO P.L. 21355 EAST DIXIE HIGHWAY SUITE 115 MIAMI, FL 33180 | | | EXAMINER LEYBOURNE, JAMES J | |
| | | | ART UNIT 2881 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/549,835

Applicant(s)

OKAMURA ET AL.

Examiner

James J. Leybourne

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/17/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112: The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. The term "having a reinforcing ability against bending" in claim 6 is a relative term which renders the claim indefinite. The term "a reinforcing ability against bending " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McCluer et al. (US 3,622,432), hereinafter McCluer '432.
5. Regarding claims 1 and 2, McCluer '432 discloses a flexible sheet barrier material for shielding ionizing radiation, high energy gamma radiation and nuclear radiation. The barrier material comprises a fabric base bearing on at least one surface a lead-loaded elastomeric layer which has dispersed therethrough very finely divided powdered lead particles throughout the elastomeric layer (columns 1-2, lines 70-2). The material has a woven, knitted or felted fabric portion that serves as a flexible support for the elastomeric film. For example, an asbestos base cloth can be used where the fabric support is desired to be flame retardant (column 3, lines 11-31). The material may be flame proofed and water-repellent. Flame-proofing and water-repellent properties are desirable for most marine applications, and in many instances these preliminary treatments of the fabric support will be mandatory for fabric life and environmental safety (column 3, lines 40-46).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCluer '432 as applied to claim 1 above, in view of Sakurai (US 2002/0077439).

8. McCluer '432 teaches all of the limitations of claim 3 except use of a metallic iron, an iron oxide and a dielectric material being capable of absorbing electromagnetic radiation as the dispersed material.

9. Sakurai discloses electromagnetic wave absorbing silicone rubber compositions that have an ability to absorb electromagnetic waves. The compositions are flexible and comprise a soft magnetic powder of iron or iron alloy in silicone rubber [0009].

10. It would be obvious to a person of ordinary skill in the art at the time the invention was made to use the composition of Sakurai as the sheet barrier material of McCluer '432 because Sakurai teaches, blending a soft magnetic powder in silicone rubber and by further blending a specific surface treating agent therein the powder can be loaded in a larger amount.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCluer '432 as applied to claim 1 above, in view of McCluer (US 3,062,678), hereinafter McCluer '678.

12. McCluer '432 teaches all of the limitations of claim 5 except for the limitation "non-air permeable coating". McCluer '678 teaches the flexible fabric support may be

rendered flameproof and water-repellent but fails to explicitly state the fabric is coated with a "non-air permeable coating".

13. Mccluer '678 discloses a flexible fabric, which is flame retardant and also highly impervious to the passage of water vapor.

14. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the shield material of McCluer '432 to use a fabric that is flame resistant and provides a vapor barrier, as taught by Mccluer '678 because 'McCluer '432 teaches Flame-proofing and water-repellent properties are desirable for most marine applications, and in many instances these preliminary treatments of the fabric support will be mandatory for fabric life and environmental safety (column 3, lines 43-47).

15. Claims 6 -9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosmo et al. (USPN 4,923,741).

16. Kosmo et al. discloses a hazards protection multi-layered covering that includes a radiation attenuating layer 28 comprised of tungsten-loaded polymeric elastomer such as silicone rubber or tetrafluoroethylene fabricated in its formulation by uniform mixing of tungsten particles in micron sized powder form with the tetrafluoroethylene or silicone rubber as a binder material, which mixture is then extruded as a smooth sheet of a tungsten-loaded polymeric elastomer binder (column 5, lines 57-64).

17. The next adjacent layer 32 serves as a structural support and is the final inner layer of the protective covering (column 6, lines 10-21).

18. The layers are attached with securing means 36.

19. Kosmo et al. does not teach that the reinforcing member has "reinforcing ability against bending". Kosmo et al. states the hazards protection multi-layered covering (is also intended that for fixed-wall or solid hull structure space suits (column 5, lines 11-17). It is inherent that a fixed-wall or solid hull structure resists bending.

20. Regarding claim 8, Kosmo et al. teaches that nylon is a suitable material for layer the final layer 32.

Allowable Subject Matter

21. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

22. With respect to the claim 10, the prior art fails to disclose or make obvious a shield material attached with a reinforcing member onto a shielding element consisting of an elastic polymeric organic compound dispersed with a dispersed material having a nuclear or electromagnetic radiation-shielding ability wherein the reinforcing member is attached to the shielding element using compression-bonding.

23. With respect to the claim 11, the prior art fails to disclose or make obvious a shield material attached with a reinforcing member onto a shielding element consisting of an elastic polymeric organic compound dispersed with a dispersed material having a nuclear or electromagnetic radiation-shielding ability wherein said reinforcing member is

attached to said shielding element in such a manner as to be compression-bonded between two divided pieces of said shielding element.

24. With respect to the claim 12, the prior art fails to disclose or make obvious a shield material attached with a reinforcing member onto a shielding element consisting of an elastic polymeric organic compound dispersed with a dispersed material having a nuclear or electromagnetic radiation-shielding ability which further includes a cloth-like sheet which is wrapped around the integral structure of said shielding element and said reinforcing member attached thereto, said cloth-like sheet being interweaved with a high-strength fiber which is either one selected from the group consisting of glass fiber, metal fiber and nylon fiber.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Leybourne whose telephone number is 571 262-2478. The examiner can normally be reached on M_F 1:00PM - 5:00 PM.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 1, 2007
JJL


ROBERT KIM
SUPERVISORY PATENT EXAMINER